

UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

SLOAN VALVE COMPANY, a Delaware corporation,	)	
	)	
	)	
Plaintiff,	)	
	)	
v.	)	
	)	Case No. 1:10-cv-00204
ZURN INDUSTRIES, INC., a Delaware corporation,	)	
	)	Judge: Hon. Amy J. St. Eve
	)	
and	)	Magistrate Judge: Hon. Sidney I.
	)	Schenkier
ZURN INDUSTRIES, LLC, a Delaware limited liability company,	)	
	)	REDACTED VERSION
	)	
Defendants.	)	

**PLAINTIFF SLOAN VALVE COMPANY'S RESPONSE BRIEF  
IN OPPOSITION TO DEFENDANTS' DAUBERT MOTION TO  
EXCLUDE TESTIMONY OF RICHARD BERO**

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## INTRODUCTION

Zurn does not contend that Sloan's damages expert Richard Bero is unqualified. Nor could it. Mr. Bero is both a Certified Public Accountant and Certified Valuation Analyst (CVA), and he has testified as a damages expert more than 100 times in dozens of different courts. (Ex. 68 Opening Expert Report of Richard F. Bero dated January 28, 2013 (Bero Report) at Attachment 2; Ex. 69 Reply Expert Report of Richard F. Bero dated April 5, 2013 (Bero Reply) at Attachment 2.) He developed and teaches the intellectual property damages course for the National Association of CVAs; and, he has presented extensively on reasonable royalty damages, the entire market value rule, and other patent damages issues through groups such as Westlaw, Business Valuation Resources, the American Intellectual Property Lawyers Association, state intellectual property lawyers associations, Licensing Executive Society, local bar associations, and various others. *Id.* Bero also has authored articles on patent damages issues and is the author of a chapter entitled "Lost Profits Damages in Patent Infringement Lawsuits" in a book published by BVR Publications that covers patent damages issues, including reasonable royalty damages.

Perhaps because Bero's qualifications are unassailable, Zurn's challenges to Bero's proposed testimony are based on inaccurate characterizations of case law, incomplete and inaccurate descriptions of the bases for Bero's opinions, and ignoring facts that support Bero's opinions. Bero's methodology is grounded in long-standing and well-accepted legal principles; is fully consistent with recent cases relevant to patent damages; and, is firmly supported by the facts of this case. While some of those facts are contested, that is not a proper basis to exclude an expert's opinion. *Deputy v. Lehman Bros., Inc.*, 345 F.3d 494, 505-509 (7th Cir. 2003) ("whether an expert's theory is correct is a factual question for the jury to determine."); *Smith v.*

*Ford Motor Co.*, 215 F.3d 713, 718 (7th Cir. 2000) (“The soundness of the factual underpinnings of the expert’s analysis and the correctness of the expert’s conclusions based on that analysis are factual matters to be determined by trier of fact.”). Zurn’s arguments are properly addressed through cross-examination at trial, and its motion should be denied without wasting judicial and party time and resources on a hearing.<sup>1</sup>

## **I. SUMMARY OF BERO’S OPINIONS**

Reasonable royalty opinions typically focus on the fifteen factors set forth in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970), *modified and aff’d*, 446 F.2d 295 (2d Cir. 1971). In essence, the experts must put themselves in the shoes of hypothetical negotiators at the time of infringement, or (as here) at the time infringer knew of the patent application.<sup>2</sup> *Id.* at 1116. The hypothetical negotiation accounts for market conditions, the course of dealing between the parties, and various other factors that inform each negotiator’s licensing price.

Bero applies this methodology and describes in detail what Sloan and Zurn would stand to lose or gain from reaching an agreement to license Sloan’s Manual Dual Flush Valve (MDFV) technology. (Ex. 68 Bero Report pp. 46-51; Ex. 69 Bero Reply pp. 55-58.) Sloan, as patent owner and MDFV market leader, would be motivated to accept no less than the amount it

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<sup>1</sup> See *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999) (“The trial court must have the same kind of latitude in deciding *how* to test an expert’s reliability, and to decide whether or when special briefing or other proceedings are needed to investigate reliability, as it enjoys when it decides *whether* that expert’s relevant testimony is reliable.”); *Padillas v. Stork-Gamco, Inc.*, 186 F.3d 412, 418 (3d Cir. 1999) (“An in limine hearing will obviously not be required whenever a *Daubert* objection is raised to a proffer of expert evidence. Whether to hold one rests in the sound discretion of the district court.”)

<sup>2</sup> It is undisputed that as of July 2006, Zurn was aware of Sloan’s provisional patent application. (Mot. at 20). *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 75 (Fed. Cir. 2012) (the date of the hypothetical negotiation is the date the infringement began).

foreseeably would lose by allowing Zurn, the infringer, to make and sell the patented invention in direct competition with it. (*Id.*)

Bero's analysis incorporates three competitive realities that were of paramount importance to Sloan in this matter. First, Zurn was Sloan's only meaningful competitor<sup>3</sup> in a two-competitor market in which there were no acceptable noninfringing alternatives for the patented products. (*See Section III (E) infra.*) Sloan for decades has been the market leader in the manual flush flushometer valve market, and Zurn was virtually its only competitor. (Ex. 70 Aykroyd I 144:7-23; 146:24 - 147:5; 147:19-21; Ex. 72 2008 IGS Market Assessment dated February 25, 2008 at 138.) At the time of the hypothetical negotiation in 2006, Sloan was the only company able to offer a viable MDFV, unless it licensed Zurn to do so. Given the foregoing facts, Bero reasonably concludes Sloan would not willingly have licensed the '635 patent to Zurn for anything less than the profits it would lose by allowing Zurn to sell the patented technology. (Ex. 68 Bero Report p. 46.)

Second, Sloan and Zurn both sell and profit from collateral product sales, and the ability to offer MDFVs was critical to their ability to sell other products for projects on which the customer wanted MDFVs.<sup>4</sup> (Ex. 73 February 14, 2013 deposition of Bill Madison (Madison I) 80:18-81:11; Ex. 70 Aykroyd I 43:6-10; 72:8-9; Ex. 74 Sloan Price Guide; Ex. 75 Zurn Price

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<sup>3</sup> Two other companies, AMTC and Coyne & Delaney, also offer a MDFV product; however, neither has a significant market presence and combined represent less than 1% of the MDFV market. (Ex. 68 Bero Report p. 35-36; Ex. 70 October 22, 2012 deposition of John Aykroyd (Aykroyd I) 142:2-11; 145:19 to 146:11; Ex. 13 October 14, 2010 deposition of John Wilson 38:22-39:2, 37:10-17; Ex. 16 Opening Expert Report of Julius Ballanco dated January 28, 2013 (Ballanco Report) p. 40-41, 43-44.)

<sup>4</sup> Collateral products include diaphragm repair parts, manual and automatic urinal valves, faucets, and urinal diaphragms, and replacement parts for the manual dual flush water closet valves. (Ex. 68 Bero Report pp. 25-31.)

Guides.) Sloan would have recognized its risk in losing profits on these collateral products. Third, Zurn historically undercut Sloan's prices, including on prior art single flush valves, and Sloan already had learned that Zurn intended, consistent with its past pattern and practice, to undercut Sloan's MDFV price. (Ex. 76 Sloan email dated May 24, 2005; Ex. 40 August 4, 2005 Zurn New Product Announcement for Dual Flush Handle Assembly; Ex. 78 Zurn August 16, 2005 email; Ex. 16 Ballanco Report p. 43; Ex. 70 Aykroyd I 140:18 - 141:9; Ex. 82 April 23, 2013 deposition of John. T. Boyer (Boyer dep.) 33:3-16.) Therefore, at the time of the hypothetical negotiation, Sloan reasonably would have expected that by licensing to Zurn, Sloan would have to lower the price it charged for MDFVs. (Ex. 80 April 30, 2013 deposition of James Allen (Allen dep.) 95:12 to 96:2, 98:1-19; Ex. 16 Ballanco Report p. 45.)

As licensee, Zurn would recognize that having the ability to offer a MDFV was critical to its ability to sell both valves and collateral products. In 2005 a Zurn employee stated:

Sloan has a new FV that when you pull up on the hand it flushes 1.1 and when you push down you get a 1.6. They are using this for green buildings. *Unless we can come up with something we are going to lose the spec and the job*, much to the dismay of our rep and the engineer.

(Ex. 81, Zurn email dated June 21, 2005 (emphasis added).) Zurn would have been highly motivated to gain entry into the MDFV market to gain collateral sales and profits. (Ex. 68 Bero Report pp. 50-51.)

Consistent with his recognition of Zurn's historical practice of undercutting Sloan's prices, Bero relies on evidence that shows that Sloan reduced its MDFV prices in response to Zurn's infringement. (Ex. 68 Bero Report 17-20; Ex. 80 Allen dep. 98:1-19; Ex. 76, Sloan email dated May 24, 2005.) Prior to Zurn's infringement, Sloan's co-CEO Jim Allen distributed an internal memo setting forth proposed premium pricing of the MDFV and handle. (*Id.*) Sloan then learned that Zurn intended to offer a competing (and infringing) product at a significantly

lower price, causing Sloan to lower its MDFV prices. (Ex. 40 Zurn August 4, 2005 New Product Announcement for Dual Flush Handle Assembly; Ex. 78 Zurn August 16, 2005 email.)

Since Zurn was its only competitor and there were no acceptable substitutes<sup>5</sup> for customers who sought water savings and a lower price point, Sloan reasonably would have expected that, unless it granted a license to Zurn, Sloan would make all of the sales of MDFVs and handles that Zurn eventually made, but at the higher prices Sloan had intended to charge. (Ex. 80 Allen dep. 95:12 - 96:2, 98:1-19; Ex. 16 Ballanco Report p. 45; *See also* Section III(E) *infra*.) In reaching this conclusion, Bero reasonably relies on the Jim Allen memo, as well as on industry expert Julius Ballanco. (Ex. 76 Sloan email dated May 24, 2005; Ex. 16 Ballanco Report p. 45; Ex. 80 Allen dep. 95:12 - 96:2, 98:1-19; Ex. 69 Bero Reply p. 60.)

As the “manual dual flush valve” product name implies, the patented manual dual flush technology distinguishes the product from non-patented products. Without the patented manual *dual* flush feature, the MDFV is a different product – the lower-priced, pre-patent manual *single* flush valve. (Ex. 82 Boyer dep. 185:16-20; Ex. 73 Madison I 16:18 - 17:11.) The patented feature accounts for the entire distinction of the patented product. (*Id.*) Zurn’s suggestion that customers purchased its MDFVs to evacuate the bowl ignores the fact that if customers only cared about evacuating the bowl, they would have purchased Zurn’s lower priced manual single flush valve. Bero relies on sales data and expert testimony to conclude that customers purchased MDFVs at higher prices because, logically, they wanted the capability provided by the patented technology. (Ex. 57 February 25, 2013 and May 8, 2013 depositions of Julius Ballanco (Ballanco deps.) 214:3-10, 218:2-15.) As explained in greater detail herein, Bero accounts for

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<sup>5</sup> *See* Section III (E) *infra*.

this evidence and reasonably concludes that the patented feature is the basis for customer demand, then calculates a reasonable royalty. (Ex. 68 Bero Report p. 43.)

Zurn's attack on Bero's analysis ignores all of these factors, which would have been known and considered by both negotiators. In doing so, it suggests that Bero "distorts and misapplies the established methodology" because Bero allegedly made six mistakes. Mot. at 2. Zurn's disagreements with Bero's methodology are legally incorrect and disregard the facts of this case.

After analyzing the market and engaging in a quantitative analysis, Bero determined that the amount Sloan would have expected to lose by licensing Zurn was approximately [REDACTED] [REDACTED] and the amount Zurn would have expected to gain from obtaining a license would have been approximately [REDACTED] at the time of the hypothetical negotiation. (Ex. 69 Bero Reply p. 55-58.) Included in Sloan's expected losses and Zurn's expected benefits are: (1) profits on their respective sales of manual dual flush valves handles; (2) profits on their respective sales of collateral products based on collateral unit sales ratios and collateral product profit margins; and, (3) profits on sales of repair parts for MDFVs based on average replacement cycles, lifespan of a MDFV, and profit margins on those replacement parts. (Ex. 68 Bero Report p. 46-52; Ex. 69 Bero Reply p. 55-58.) Sloan's expected losses from licensing to Zurn also include the pricing effect of Zurn's undercutting Sloan's prices, which would require Sloan to cut its price in response to Zurn's lower prices.

Because there is no overlap between the negotiators' respective bargaining positions [REDACTED] [REDACTED] Bero reasonably used the midpoint [REDACTED] as a starting point for the remaining royalty negotiation. Bero then applied the relevant *Georgia Pacific* factors, and adjusted the royalty rate [REDACTED]. He multiplied the [REDACTED]

by the number of infringing units [REDACTED]. Bero then appropriately added [REDACTED] beginning January 13, 2010<sup>6</sup> that were that were not captured in the reasonable royalty rate. (See *infra* at Section III (F).) Finally, Bero included [REDACTED]. Bero's damages opinion is summarized in the following chart:

Summary of Damages (\$'s in millions)	
	Time Frame
[REDACTED]	10/16/06 – 10/27/09 01/13/10 – 10/15/13
Subtotal Royalty	
Price Erosion damages for period after patent issued	01/13/10 – 10/15/13
Subtotal	
Pre-judgment interest	

(Ex. 69 Bero Reply p. 4).

## II. LEGAL STANDARD

### A. FRE 702 and the *Daubert* Standard

Admission of expert testimony is governed by Federal Rule of Evidence 702 and the principles announced in *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993). *Daubert* instructs trial courts to ask whether an expert opinion “will assist the trier of fact to understand or determine a fact in issue,” and whether the expert’s opinion is reliable in that “the reasoning or methodology underlying the testimony is scientifically valid.” *Fuesting v. Zimmer, Inc.*, 421 F.3d

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<sup>6</sup> Sloan is entitled to price erosion damages beginning the date the patent issued. 35 U.S.C. § 154(d)(1).

528, 534 (7th Cir. 2005) (partially vacated on other grounds by 448 F.3d 936 (7th Cir. 2006)). In other words, the proper inquiry to test the reliability of an expert opinion is to review the expert's qualifications and methodologies. *Smith v. Ford Motor Co.*, 215 F.3d 713, 718 (7th Cir. 2001).<sup>7</sup>

*Daubert* emphasized, “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Daubert*, 509 U.S. at 596. The *Daubert* inquiry is therefore a “flexible one,” with the “focus [ ] solely on principles and methodology, not on the conclusions they generate.” *Id.* at 595.

A court should not grant a *Daubert* motion based on factual disputes about the evidence the expert relied upon. *See ActiveVideo Networks, Inc. v. Verizon Communs., Inc.*, 694 F.3d 1312, 1333 (Fed. Cir. 2012) (“disagreements go to the weight to be afforded the testimony and not its admissibility”); *Deputy v. Lehman Bros., Inc.*, 345 F.3d 494, 505-509 (7th Cir. 2003) (“whether an expert’s theory is correct is a factual question for the jury to determine”); *Micro Chem., Inc. v. Lextron, Inc.*, 317 F.3d 1387, 1392 (Fed. Cir. 2003) (“When facts are in dispute, experts sometimes reach different conclusions based on competing versions of the facts. The emphasis [...] on ‘sufficient facts or data’ is not intended to authorize a trial court to exclude an expert’s testimony on the ground that the court believes one version of the facts and not the other.”); *Smith*, 215 F.3d at 718 (same).

Zurn does not challenge Bero’s expertise in reasonable royalty damages, nor Bero’s well-grounded established reasonable royalty methodology. Rather, by ignoring the three competitive realities at issue here and mis-citing the law, Zurn suggests that Bero “distorts and misapplies the

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<sup>7</sup> In framing its *Daubert* challenge of Bero, Zurn primarily focuses only on his methodology, and not on his qualifications. *See, e.g.*, Mot. 2. The only exception is Zurn’s argument that Bero is unqualified to run an irrelevant elasticity analysis. *Id.* at 19-20.

established methodology.” But because Bero’s opinion is based on the evidence, and applies well-accepted and legally sound methodologies, satisfies Fed. R. Evid. 702 and *Daubert*.

#### **B. The Georgia-Pacific Factors**

An award based upon a reasonable royalty, like any other damages award, must compensate the patentee for defendant’s infringement. 35 U.S.C. § 284 (2012).<sup>8</sup> A reasonable royalty is the amount that a willing licensor and licensee would bargain for at an arm’s length hypothetical negotiation occurring on the date the infringement began. *Georgia-Pacific Corp.*, 318 F. Supp. at 1120; *Unisplay, S.A. v. American Elec. Sign Co., Inc.*, 69 F.3d 512, 517 (Fed. Cir. 1995) (“The statute contemplates that when a patentee is unable to prove entitlement to lost profits or an established royalty rate, it is entitled to ‘reasonable royalty’ damages based upon a hypothetical negotiation between the patentee and the infringer when the infringement began.”) (citing *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1078 (Fed. Cir. 1983)). In *Georgia-Pacific Corp.*, the court enumerated fifteen factors as a “comprehensive list of evidentiary facts relevant . . . to the determination of the amount of a reasonable royalty for a patent license.” 318 F. Supp. at 1120. In calculating a reasonable royalty, Bero properly considers the relevant facts within the framework of the *Georgia-Pacific* factors, weighing each to reflect the market and evidence. (Ex. 68 Bero Report pp.54-58; Ex. 69 Bero Reply p. 59.)

#### **III. ARGUMENT**

None of the six bases for Zurn’s motion support exclusion of Bero’s opinions, as they are merely disagreements with Bero’s alleged ‘mis-application’ of methodology based on Zurn’s mis-reading of applicable law and disregard for the evidence.

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<sup>8</sup> Zurn ignores that damages can be greater than sales price and/or profit margin, meaning it is possible that the value of a hypothetically negotiated license is more than the sales price of a product. *Powell v. Home Depot U.S.A., Inc.*, 663 F.3d 1221, 1238 (Fed. Cir. 2011).

**A. Bero Does Not Violate the Entire Market Value Rule Since He Calculated A Reasonable Royalty Based On Units, And Was Not Required to Apportion Damages.**

Zurn's first challenge is that Bero was required to apportion damages because the "Entire Market Value Rule" (EMVR) requires it. However, the EMVR and "apportionment" case law does not apply where, as here, the plaintiff's expert: (a) bases his royalty on the number of units the defendant sold, not on the defendant's sales revenue; and, (b) does not base any part of his calculation of damages on the defendant's revenues from anything larger than the patented invention.<sup>9</sup>

As the Federal Circuit explained in *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51 (Fed. Cir. 2012), the EMVR and "apportionment" case law was developed to deal with situations in which the patented invention is a small component of a larger product, and where the patent owner seeks to recover a royalty on the defendant's revenues from the sales of the larger products. *Id.* at 67 ("Where small elements of multi-component products are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product. Thus, it is generally required that royalties be based not on the entire product, but instead on the 'smallest salable patent-practicing unit. *Cornell Univ. v. Hewlett Packard Co.*'").

The EMVR and the "apportionment" rule also are not implicated by Bero's opinion because Bero does not base any part of his calculation of damages on the defendant's revenues or profits from anything other than the patented products. The patented invention is the entire flush valve. *See, e.g.*, claims 1-5, 29-30 and 31. Claim 1, for example, requires "a body having an inlet and an outlet, a valve seat between said inlet and outlet, a valve member movable to a

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<sup>9</sup> Bero properly references sales of collateral products and repair parts. *See Section III (C), infra.*

closing position on said valve seat to control water flow between said inlet and outlet, a pressure chamber defined in said body above said valve member, a relief valve..." as well as other components of the entire flush valve, including the handle assembly. (Ex. 6 U.S. Patent No. 7,607,635 (the *Wilson* patent).) Because the "smallest salable patent-practicing unit" that infringes claim 1 is the entire dual flush valve, a damages calculation based on Zurn's sales of such valves in no way involves trying to include a larger product that includes more than the patented invention in the damages calculation.

Each of the cases cited by Zurn involved an attempt by the plaintiff to base its damages calculation on the defendant's revenues from sales of a larger product which included far more than the plaintiffs' smaller patented invention. Zurn's reliance on these cases is misplaced given the facts of this case. In *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1296-1300 (Fed. Cir. 2011), the claimed invention was security software that prevented unauthorized use of Microsoft's Outlook software. *Id.* The plaintiff's expert attempted to use Microsoft's revenues from all of its sales of its entire Outlook software package – which included far more than the claimed invention – as the royalty base. *Id.* at 1318.

In *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 68 (Fed. Cir. 2012), the plaintiff's patent was a method that enabled an optical disc drive to work more effectively, but the plaintiff's expert attempted to base his damages calculations on the defendant's "total revenues from the sales of laptop computers in the United States." *Id.* The Federal Circuit rejected this approach, concluding, "... the royalty was expressly calculated as a percentage of the entire market value of a laptop computer rather than the patent-practicing [optical disc drive] alone. This is, by definition, an application of the entire market value rule."

In *Cornell Univ. v. Hewlett-Packard Co.*, 609 F. Supp. 2d 279, 283 (N.D. N.Y. 2009), the patent related to just one component of a processor chip, which was a component of a “CPU brick” which was in turn part of a larger computer server. *Id.* In the anatomy of a Hewlett-Packard server, the processor is the smallest salable patent-practicing unit; yet, the plaintiff’s damages expert at first attempted to base his damages calculation on HP’s total revenues from all sales of entire servers and workstation systems, and later on HP’s total revenues from all sales of entire “CPU bricks.” *Id.* at 287.

In *IP Innovations L.L.C. v. Red Hat, Inc.*, 705 F. Supp. 2d 687, 689-90 (E.D. Tex. 2010), the claimed invention was one small component of thousands in the accused operating systems, yet the plaintiff’s expert based his damages calculation on the defendants’ total revenues from all sales of entire operating systems. *Id.* In *Inventio AG v. Otis Elevator Co.*, No. 06 Civ. 5377, 2011 U.S. Dist. LEXIS 88965 (S.D.N.Y. June 23, 2011), the claimed invention was an elevator control system, and the plaintiff’s expert attempted to base his damages calculations on the defendant’s total revenues from all sales of the entire elevator. *Id.* Finally, in *Lucent Techs., Inc. v. Microsoft Corp.*, No. 07-CV-2000 H, 2011 U.S. Dist. LEXIS 75504 at \*28-30 (S.D. Cal. July 13, 2011), the plaintiff’s patented invention was limited to a particular method of setting up calendar appointments, yet the plaintiff’s expert was attempting to base his damages calculation on Microsoft’s total revenues from Outlook, which contains, in addition to a calendar function, email functions and other functions. *Id.*

None of these cases is applicable to this case, because in each of them, the plaintiff’s expert opined that damages should be based on the revenues from the entire market of products that extended far beyond the patented invention claimed in the claims of the patent in suit -- rather than the royalties from the number of “smallest saleable patented-practicing units” sold.

Bero, on the other hand, recognizes that the patented MDFV is the smallest possible patent practicing unit, and has calculated reasonable royalties based on the number of such units.<sup>10</sup>

The EMVR and apportionment case law relied upon by Zurn is inapplicable where, as here, the plaintiff's expert does not use the defendant's revenues as his royalty base, but instead uses the number of units the defendant has sold. (Ex. 69 Bero Reply 4, 12-13.) In each of the cases cited by Zurn, the plaintiff's expert attempted to use the defendants' revenues as his royalty base, implicating the EMVR. But where an expert (like Bero) uses the number of units the infringer sold, and not the infringer's revenues from those sales, as his royalty base, the dangers the EMVR was designed to avoid are not presented, and there is no legally sound reason to preclude the plaintiff's expert from offering such testimony. *Ericsson, Inc. v. D-Link Corp.*, No. 6:10-CV-475, 2013 U.S. Dist. LEXIS 71564 at \*17 (E.D. Tex. May 21, 2013) (because per-unit end royalties do not fluctuate with the price of the end product, the EMVR is not implicated). Nonetheless, Zurn attempts to rely on *Lucent Technologies*, 2011 U.S. Dist. LEXIS at 75504, for the proposition that the EMVR is applicable even where an expert bases his calculations on the number of units the defendant sold, without ever mentioning the defendants' sale revenues. Mot. at 8. But that opinion does not stand for the proposition Zurn advances. Rather, in *Lucent v. Microsoft*, just as in *Uniloc* and the other cases cited by Zurn, the plaintiff's expert based his

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<sup>10</sup> In addition to arguing that inapplicable cases should disqualify Bero from this matter, Zurn overstates the fact that a small portion of Sloan's and Zurn's sales of dual flush valves [REDACTED] were made as part of "packages" that included a toilet bowl, therefore invoking the EMVR. Mot. at 8. However, this argument also does not render Bero's analysis invalid, because he does not in any way base his damages calculation on the revenues from those sales, nor attribute any larger profit to those sales than to sales of the dual flush valves alone. In fact, Bero attributes a lower profit to those sales than he does to Zurn's and Sloan's sales of dual flush valves alone, so if anything, the fact that in those few instances the infringing flush valves were sold as part of larger packages actually results in a decrease in the royalty Bero calculates when compared to what the calculations would have shown if he simply had attributed the same profit to the sales of those dual flush valves as Sloan and Zurn earned when they sold the valves alone. (Ex. 69 Bero Report at Schedule 14)

royalty calculation on the defendant's sales revenues. *See Lucent Techs., Inc.*, 2011 U.S. Dist. LEXIS 75504 at \*28-30; *Uniloc*, 632 F.3d at 1318; *Inventio AG*, 2011 U.S. Dist. LEXIS 88965 at \*13-14; *LaserDynamics, Inc.*, 694 F.3d at 68; *Cornell Univ.*, 609 F. Supp. 2d at 283; and *IP Innovations L.L.C.*, 705 F. Supp. 2d at 689-90.

Notably, the same District Court that decided *Lucent v. Microsoft* made this distinction clear, holding that the EMVR has no applicability to a damages expert who uses units, rather than revenues, as the royalty base for his calculations:

The entire market value rule is applicable when a patentee uses the revenue or profits of an entire accused product as his royalty base. In having a royalty of \$1.50 per product, [the expert's] royalty does not use Defendants' revenues or profits as a royalty base. His royalty is based on the number of units sold regardless of the amount of revenue or profits derived from the various products. Therefore, [the expert's] \$1.50 per unit royalty does not rely on the entire market value of Defendants' accused products, and the entire market value rule does not apply. . . .

*Multimedia Patent Trust v. Apple Inc.*, No. 10-CV-2618-H, 2012 U.S. Dist. LEXIS 165928, at \*18 (S.D. Cal. Nov. 20, 2012) (citations omitted).

Where, as here, the plaintiff's expert bases his opinion on legally approved methodology, but defendant has not relied on sound law, the Court should not strike plaintiff's expert from the case.

**B. There is Ample Evidence The Patented Technology Was the Basis For Consumer Demand.**

Even if the EMVR were implicated here – which is it not, for the reasons stated above – the evidence would amply support a jury finding that the patented dual flush technology was the basis for customer demand for the MDFVs and handles Zurn sold.

Where applicable, the EMVR merely requires that plaintiff show the patented invention motivated consumers to buy the product in question. Zurn asks the Court to take the damages

determination away from a jury because both unpatented single flush valves and the patented dual flush valves both “evacuate the bowl.” But numerous Federal Circuit cases have found the requirements of the EMVR to have been met without requiring the plaintiff to either show that consumers would have no reason to buy the product in question if it did not have the patented feature or introduce an “analysis of demand sensitivities”.

Several cases are illustrative. In *Bose Corp. v. JBL, Inc.*, 274 F.3d 1354 (Fed. Cir. 2001), the patented invention was a port in a loudspeaker enclosure. The District Court awarded reasonable royalty damages on a royalty base consisting of “the entire value of the loudspeaker systems incorporating the accused ports, even though they only comprised a small component of the system.” *Id.* at 1361. The Federal Circuit held the plaintiff had met the requirements of the EMVR because it had shown that “the invention of the ‘721 patent improved the performance of the loudspeakers and contributed substantially to the increased demand for the products in which it was incorporated” and that “the invention of the ‘721 patent was integral to the overall performance of its loudspeakers....” *Id.* Plainly, a loudspeaker without the improved port still would have functioned as a loudspeaker – just as a manual single flush valve would function to “evacuate the bowl.”

In *Fonar Corp. v. General Electric*, 107 F.3d 1543 (Fed. Cir. 1997), the patent covered an improvement to an MRI machine that enabled its operator to obtain multiple image slices of a patient’s body *at different angles* in a *single* scan. MRI machines without the patented feature could obtain multiple parallel image slices of a patient’s body in a single scan, or multiple image slices at various angles using *multiple* scans. *Id.* at 1546. The jury awarded reasonable royalty damages using GE’s profits from sales of entire MRI machines as the royalty base. *Id.* at 1552. Applying the law that the plaintiff had to show “the patented feature is the basis for consumer

demand for the entire machine,” the Federal Circuit held that GE’s promotional literature emphasizing the patented feature was sufficient evidence from which the jury could so find. *Id.*

In *State Industries, Inc. v. Mor-Flo Industries, Inc.*, 883 F.2d 1573 (Fed. Cir. 1989), the patented invention was a method for installing insulation around water heaters. Of course, a water heater without insulation will still heat water. The District Court awarded damages based on the defendant’s sales of water heaters, not merely the foam insulation around them. *Id.* at 1580. The Federal Circuit sustained the award, applying the rule that the plaintiff had to show that “the patented feature is the basis for customer demand.” *Id.*

Bero reaches the same conclusion, and in doing so, relies on evidence that the patented technology is the basis for purchaser’s demand for manual dual flush products. (Ex. 68 Bero Report p. 43; Ex. 71 April 24, 2013 deposition of John Aykroyd (Aykroyd II) at 64:18-23; Ex. 80 Allen dep. 56:2 to 57:12; Ex. 82 Boyer dep. 72:7 - 73:13, 138:17-21.) The MDFV has succeeded in the market due to its patented water-saving technology (Ex. 71 Aykroyd II 64:18-23; Ex. 80 Allen dep. 56:2 - 57:12; Ex. 82 Boyer dep. 138:17-21), and even Zurn’s MDFV advertising touts the dual flush capability’s importance. (Ex. 83 Zurn’s marketing materials.) Nonetheless, the primary basis for Zurn’s factual challenge to Bero is that customers do not buy MDFVs because of the patented feature, but rather because they “evacuate the bowl,” a feature present in every kind of flush valve ever made by Sloan or Zurn. Mot. at 11. This argument ignores that the MDFV technology added *anything* to the market. But Zurn is wrong. Put simply, the sole difference between a manual single flush valve and a MDFV is the patented technology (and certainly not toilet bowl evacuation). (Ex. 82 Boyer dep. 185:16-20; Ex. 73 Madison dep. 16:18 - 17:11.) The patented technology provides customers with a water saving option as compared to a standard 1.6 gpf flush valve. (Ex. 82 Boyer dep. 185:16-20; Ex. 73

Madison dep. 16:18 - 17:11.) The MDFV costs more than a manual single 1.6 gpf flush valve. If customers had not demanded the manual dual flush capability, they would have chosen a manual single flush valve for a lower price. (Ex. 74 Sloan price list; Ex. 75 Zurn price lists.) In fact, the only difference between the products—other than the price—is the patented technology.

Zurn also attempts to confuse the issue by arguing that customers buy the MDFV for a host of reasons, including an antimicrobial handle. With regard to Sloan’s MDFVs, the antimicrobial handle is not essential or even a primary feature. Mot. at 12-13. It is optional on all of Sloan’s flush valve products that have a handle and customers may purchase the antimicrobial handle separately. (Ex. 74 Sloan price list p. 93.)

In support of its position, Zurn cites to the deposition transcript of Sloan’s Vice President of Business Development John Aykroyd’s regarding a single sale to a school interested in the antimicrobial handle. Mot. at 12-13. Aykroyd’s quote is taken out of context; but in any context, it does not say antimicrobial handles are more important than the patented technology, or even that the sole basis of the school’s purchase of the MDFV was based on the handles. It merely states that in one instance, a school regarded a second feature of the MDFV (*i.e.*, the antimicrobial handle) was “important.” (Ex. 70 Aykroyd I 37:4-23.) Moreover, Aykroyd never testified the handle was integral to the overall performance and success of the MDFV and never testified that any other customers buy the MDFV for the antimicrobial handle. Zurn offers no other evidence refuting all of the other evidence Sloan has that the patented technology is not the basis for consumer demand and this single statement by Mr. Aykroyd is properly addressed during cross-examination at trial.

Because in all respects other than the patented technology the single flush valve is identical to the MDFV, a customer would have no reason to pay [REDACTED] for the

Zurn MDFV over Zurn's manual single flush valve unless it sought the patented water saving technology. (Ex. 84 Expert Report of Ivan T. Hofmann dated March 8, 2013 at Exhibit A2.) The MDFV's ability to succeed in the marketplace is entirely reliant on the water savings patented feature. But for the patented technology, the single flush valve and MDFV would perform the exact function; therefore, if the dual flush capability did not drive the demand, rudimentary economic principles dictate that the single flush valve (sold at a cheaper price) would eliminate the demand for the MDFV. (Ex. 68 Bero Report p. 43.)

Zurn's last argument is that Bero is required to perform an "analysis of demand sensitivities," and it purports to rely on *LaserDynamics* and *Inventio* for support. Mot. at 11-12. But Zurn overstates the holdings in these easily distinguishable cases (see, e.g., the *Bose*, *Fonar*, and *State Industries* cases discussed above, none of which required such an analysis). Here, unlike in *Inventio*, the evidence demonstrates that the patented feature accounted for 100% of the MDFV. And unlike in *LaserDynamics*, Bero did not calculate the royalty as a percentage of revenues from an entire machine that includes many other patents.

It should be up to a jury to apply the *Georgia Pacific* factors in light of the evidence and reach the inescapable, common sense conclusion that the only reason customers buy the higher priced manual dual flush valves rather than lower-priced single flush valves is the presence of the patented dual flush technology and thus, the patented technology is the basis for customer demand and success in the marketplace. Bero's testimony based on substantial evidence is admissible pursuant to *Daubert* and *Georgia Pacific*.<sup>11</sup>

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<sup>11</sup> Although the EMVR rule does not apply because Bero used the number of units sold as the royalty base, even if the Court finds that the EMVR does apply and the patented feature is not the basis for customer demand, Bero is still not obligated to apportion Zurn's profits and Sloan's damages between the patented and unpatented features of the MDFV because the patented technology accounts for 100% of the MDFV product and therefore, there is nothing to apportion.

**C. Bero Properly Considers That Sloan Would Have Known that Licensing to Zurn Would Cause Sloan to Lose Profits on Sales of Convoyed and Derivative Products in Determining the Reasonable Royalty Rate.**

**1. Bero’s Reasonable Royalty Methodology is Supported By Statute, Case Law, and Jury Instructions.**

Zurn begins its third challenge to Bero’s opinion with a discussion of the supposed motivations of Sloan’s counsel in seeking a reasonable royalty measure of damages in this case. Sloan’s (or its counsel’s) motives are irrelevant.<sup>12</sup> What matters is: (a) whether the law allows Sloan to recover a reasonable royalty; and if so, (b) whether Sloan would have expected that licensing Zurn to sell the infringing MDFVs would cause Sloan to lose convoyed sales and replacement part sales.

Zurn cannot reasonably argue that a reasonable royalty measure of damages is not available to Sloan....” 35 U.S.C. § 154(d)(1) states that “a patent shall include the right to obtain a reasonable royalty from any person who...makes, uses, offers for sale or sell in the United States the invention as claimed in the published application 35 U.S.C. § 282 similarly provides, “the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty....”

Nor can Zurn reasonably contend that the determination of a reasonable royalty must ignore the effect of patented product sales in promoting the sales of other, non-patented convoyed or derivative products. The rule that such convoyed or derivative sales should be considered in determining reasonable royalty damages traces back to *Georgia Pacific*, which lists, among the factors that should be considered in determining the reasonable royalty, “[t]he

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<sup>12</sup> It bears noting, however, that Zurn takes great liberties in citing Bero’s deposition testimony; in fact, Bero denied that counsel directed him to apply one methodology over another for any improper purpose. (Ex. 85 March 1, 2013 deposition of Richard Bero (Bero Dep.) 71:1-21.)

effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales.” *Georgia Pacific*, 318 F. Supp. at 1120; *see also Trans World Mfg. Corp. v Al Nyman & Sons, Inc.* 750 F.2d 1552, 1568 (Fed. Cir. 1984) (the effect of infringement in promoting the defendant’s sales of products not covered by the patent could not be considered for purposes of a lost profits calculation, but was an appropriate consideration in determining the reasonable royalty the defendant should pay).

The rule was reaffirmed by the Federal Circuit sitting *en banc* in *Rite-Hite v. Kelly Co.*, 56 F.3d 1538, 1554 (Fed. Cir. 1995). In *Rite Hite*, the patent was on a vehicle restraint that prevented a truck positioned at a load dock from moving while it was being unloaded. *Id.* at 1542. The plaintiff sold both restraints and another product, known as a dock leveler, which did not function together with the restraint, but which customers sometimes purchased from the same manufacturer who sold the restraint. *Id.* The District Court awarded Rite-Hite lost profits damages on some of the defendant’s sales of the infringing restraints, and reasonable royalty damages on the defendant’s remaining sales. *Id.* at 1543. The lost profits damages award included lost profits on Rite Hite’s lost sales of both its restraints and its dock levelers; for those units for which it did not award lost profits, the District Court considered Rite Hite’s anticipated lost profits on both the restraints and the dock levelers in determining the reasonable royalty rate. *Id.* On review, the Federal Circuit held that a party could not recover *lost profits* for lost sales of convoyed products that did not have a “functional relationship” with the patented product, and reduced the lost profits award accordingly. *Id.* at 1554. However, when it turned to the *reasonable royalty* portion of the damages award in that case, the Federal Circuit held it was appropriate to take the lost profits on the sales of the dock levelers into account in determining

the reasonable royalty rate. *Id.* at 1554-55. Thus, *Rite Hite* holds that while a jury may not award *lost profits* on lost convoyed sales of unpatented products that are not “functionally related” to the patent product, the jury may properly take those anticipated lost profits on convoyed sales into account in determining the *reasonable royalty rate* to be assessed against the infringer for its sales of the infringing product. *Id.*

Numerous subsequent cases have followed this holding. *See, e.g., Interactive Pictures Corp. v. Infinite Pictures, Inc.*, 274 F.3d 1371, 1385-86 (Fed. Cir. 2001) (“the ‘extent of...derivative or convoyed sales’ is one of the often-cited Georgia Pacific factors relevant to determination of a reasonable royalty rate.”); *Minks v. Polaris Indus.*, 546 F.3d 1364, 1373 (Fed. Cir. 2008) (citing with approval the sixth *Georgia Pacific* factor and holding, “In *Rite Hite*, this court clarified that ‘the relevance of anticipated collateral sales to the determination of a reasonable royalty rate’ is not to be confused with the application of the entire market value rule...”).

The Seventh Circuit Civil Jury Instructions further recognize this methodology. The committee comments to pattern instruction No. 11.4.3.4 note:

the existence of such convoyed sales may be taken into account in setting a reasonable royalty rate, whether or not any functional relationship exists between the two. *Rite-Hite*, 56 F.3d at 1554; *Georgia-Pacific*, 318 F. Supp. at 1120 (factor no. 6). However, lost profits may only be recovered on the subset of convoyed products for which a functional relationship exists. . . .

Seventh Circuit Civil Jury Instruction No. 11.4.3.4, n.2. The Jury Instructions then instruct, “In determining a reasonable royalty, you may consider the following factors ... [w]hether use of the patented invention helps to make sales of other products or services.” *Id.*, Instruction 11.4.4. Bero’s analysis follows both governing law and the Seventh Circuit jury instructions.

## 2. The Law Does Not Require “Simultaneous” Sales.

Zurn’s next unsupportable argument against Bero’s inclusion of sales of unpatented products in determining a reasonable royalty is that such sales can only be considered if they are made “simultaneously” with the sale of the patented product. Mot. at 15. In support, Zurn relies on a statement in a footnote in *Carborundum Co. v. Molten Metal Equip. Innovations, Inc.*, 72 F.3d 872, 881 n.8 (Fed Cir. 1995), and argues that, to be considered in determining the reasonable royalty rate, the sale of other unpatented products “must occur simultaneously” with the sale of the patented product. Mot. at 15. But *Carborundum* says no such thing. It simply expresses a preference for certain terminology: “The expression ‘convoyed sales’ should preferably be limited to sales made simultaneously with a basic item; the spare parts here should be called ‘derivative sales.’” 72 F.3d at 881 n.8. Noting that the trial court had awarded the plaintiff damages for the defendant’s “derivative” sales, the court agreed plaintiff was entitled to past sales of repair parts and upheld the award. *Id.* at 882.<sup>13</sup>

In fact, the law refutes Zurn’s contention. In *Micro Chem.*, 317 F.3d 1387, both parties provided computer systems used for tracking animal health records to their animal feedlot customers at modest cost, in the hope those customers would purchase ongoing supplies of drugs for the animals. *Id.* at 1389. Plaintiff’s patent covered the computer software, not the drugs. *Id.* at 1393. But the plaintiff’s reasonable royalty damages case was premised almost entirely on the parties’ large profits on subsequent sales of the drugs. *Id.* at 1398. The jury awarded royalties

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<sup>13</sup> The other case cited by Zurn, *Inline Connection Corp. v. AOL Time Warner Inc.*, 470 F. Supp. 2d 424, 432-33 (D. Del. 2007), also provides no support for its position. The District Court in that case merely characterized the defendant’s position as being that convoyed sales must be simultaneous; it disposed of the issue by ruling that even the plaintiff’s expert had conceded that on the facts of that particular case, the non-simultaneous sales were “irrelevant to his calculation of a reasonable royalty.” *Id.* at 433.

from the infringing software and the drugs, and defendant appealed. The Federal Circuit held it was appropriate to permit the plaintiff's expert to base his royalty rate analysis on the lost profits on the ongoing sales of drugs, which the Court referred to a "derivative sales." *Id.* at 1393 (Before, trial, the district court ruled that Micro Chemical could not include sales of non-patented items in the royalty base but could demonstrate that those sales were relevant in determining a reasonable royalty. That ruling is consistent with one of the Georgia-Pacific factors—"the effect of selling the patented specialty in promoting sales of other products of the [infringer].").

**3. There is Ample Evidence From Which the Jury Could Conclude that Sloan's and Zurn's Sales of MDFVs Promote Collateral Sales.**

Zurn next attacks whether there is sufficient evidence that the sale of Sloan's MDFVs causes Sloan to obtain sales of the other unpatented products, rather than vice versa. To begin with, this is not a proper basis for a *Daubert* motion, since it is based on a disagreement about the timing of product sales. *See Micro Chem.*, 317 F.3d. at 1393 (denying *Daubert* motion where dispute rests on factual disagreement). Second, there is ample evidence that the sales of Sloan's MDFVs cause the winning supplier of MDFVs – whether it is Sloan or Zurn -- to capture sales of other products such as urinal valves and replacement parts for the manual dual flush water closet valves – for the same project. (Ex. 73 Madison dep. 80:9-22, 93:4-7, 100:18-22, 102:12-18; Ex. 71 Aykroyd II 127:17, 31:7 - 33:1, 128:18 - 135:23; Ex. 16 Ballanco Report p. 45.) Specifically as to faucets, Sloan National Sales Manager Bill Madison testified:

"I would say that the strength of our product line has been the flush valve, and it helps drive the faucets as opposed to faucets driving the flush valves."

(Ex. 73 Madison dep. 93:4-7.)

The law does not require that the percentage of cases in which the sale of a MDFV enables Sloan to also sell the sensor faucets for the same bathroom be 100%. It is not the

plaintiff's burden to show that each and every sale of a patented product produces a sale of the unpatented convoyed or derivative products. In *Rite Hite* itself, the District Court noted that only about half of the sales of patented restraint products promoted a sale of the noninfringing convoyed leveler product. *Rite Hite Corp. v. Kelley Co.*, 714 F. Supp. 1514 at 1535. *See also Inline Connection Corp. v. AOL Time Warner*, 470 F. Supp. 2d 424, 432-33 (D. Del. 2007) (“[c]onvoyed sales occur when the sale of one thing is *likely* to cause the sale of another.”).

Finally, Zurn again states that Sloan must satisfy the Entire Market Value Rule and show that the products constitute a “functional unit.” Mot. at 17. In so doing, Zurn is asking this Court to ignore all of the foregoing case law that states it is proper to consider collateral sales of functionally unrelated products for purposes of determining a reasonable royalty rate, and inviting this Court to do precisely what the Federal Circuit warned against in *Minks*: “In *Rite Hite*, this court clarified that ‘the relevance of anticipated collateral sales to the determination of a reasonable royalty rate’ is not to be confused with the application of the entire market value rule...” *Minks*, 546 F.3d at 1373 n.6.

**D. Bero' Analysis is Based on the Facts and Circumstances of this Case and He Did Not Arbitrarily Split the Difference Between the Parties' Positions.**

Zurn's fourth argument for excluding Bero's entire reasonable royalty opinion is that Bero arbitrarily split the difference between the parties' respective bargaining positions. But a review of Bero's method demonstrates Zurn completely mischaracterized and apparently misunderstood the steps Bero took to calculate the royalty rate.

Bero first applied facts of record and circumstances in the market to set the starting point of [REDACTED] during the hypothetical negotiation. (Ex. 69 Bero Reply pp. 55-61.) Following this quantitative analysis, and because there was no overlap between Sloan's and Zurn's respective bargaining positions, Bero qualitatively determined that

the fair starting point of a hypothetical negotiation was the midpoint [REDACTED] (Ex. 69 Bero Reply p. 58.) He did not end his analysis there, but continued his economic analysis based on the *Georgia Pacific* factors, including numerous qualitative considerations. (Ex. 69 Bero Reply pp. 58-59.) Specifically, Bero applied *Georgia Pacific* factors Four and Five [REDACTED] [REDACTED] (Ex. 68 Bero Report 58-59.) In *Inventio AG*, 2011 U.S. Dist. LEXIS 88965 at \*10, the court held this is an appropriate method for calculating patent damages. At no point did Bero “force a compromise” as Zurn contends; rather, he applied the *Georgia Pacific* factors to the facts and circumstances of this hypothetical negotiation to arrive at the most likely compromise the parties would have reached.

To support its argument, Zurn cites readily distinguishable cases. Bero’s procedure is vastly different than 25% general rule of thumb approach rejected in *Uniloc*, 632 F.3d at 1318 and *LaserDynamics*, 694 F.3d 51; and, the Nash Bargaining Solution cited in *Oracle Am., Inc. v. Google Inc.*, 798 F. Supp. 2d 1111 (N.D. Cal. 2011) is not a lynchpin of Bero’s report.<sup>14</sup>

#### **E. Zurn Misstates the Case Law and the Facts Relating to Price Erosion.**

In its fifth challenge, Zurn argues that to prove price erosion damages, a plaintiff must, as a matter of law, “conduct a scientific analysis of price elasticity.” Zurn cites one case, *Crystal Semiconductor Corp. v. Tritech Microelectronics Int’l, Inc.*, 246 F.3d 1336 (Fed. Cir. 2001) for this proposition. However, as both *Crystal Semiconductor* itself and the Federal Circuit’s

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<sup>14</sup> Assuming arguendo that Mr. Bero confirmed his analysis by applying the Nash Bargaining Solution, that procedure is a well-accepted economic principle that has been allowed in recent cases. See e.g. *VirnetX Inc. v. Cisco Sys.*, et al., No. 6:10-CV-417, 2013 U.S. Dist LEXIS 28223 (E.D. Tex. Mar. 1, 2013) (allowing use of the Nash Bargaining Solution where the expert proffered some explanation as to why the parties may have deviated from a traditional profit split.); *Mformation Techs., Inc. v. Research in Motion Ltd.*, No. C 08-04990 JW, 2012 U.S. Dist. LEXIS 56784 (N.D. Cal. Mar. 29, 2012) (allowing use of the Nash Bargaining Solution to corroborate finding from a *Georgia-Pacific* analysis).

subsequent decision in *Ericsson, Inc. v. Harris Corp.*, 352 F.3d 1369, 1379 (Fed. Cir. 2003) plainly state, there is no such *per se* rule.

The Court in *Crystal Semiconductor* recognized there are several different kinds of markets: markets in which “any price increase would eradicate demand”; markets in which “substitution of a[nother] product” is “impossible” so that even a large price increase will not reduce demand for the product; and, more “typical” markets in which there are competitive products, and where price elasticity is “greater than zero and less than infinity.” *Crystal Semiconductor*, 246 F.3d. at 1359. It then found that the relevant market at issue – CODECs for personal computers – was a highly competitive market with a number of noninfringing suppliers. *Id.* at 1358. It then held the plaintiff had to account for a competitive market where potential customers had numerous acceptable noninfringing alternatives and one would expect that as one of numerous available suppliers raised its price, the quantity of products customers would buy from that particular supplier would fall, as those customers would shift to other, cheaper sources of equally acceptable competing products. *Id.* at 1359. But the Federal Circuit further recognized that in markets where there is no acceptable noninfringing substitute for the patented product, the plaintiff would not experience any decrease in sales even if it raised the price of its patented product. *Id.* Therefore, the court placed an important caveat on baseline economic principles: “[t]o show causation with reliable evidence, a patentee must produce credible economic evidence to show the decrease in sales, if any, that would have occurred at the higher hypothetical price.” *Id.* (emphasis added)

Two years later, in *Ericsson, Inc. v. Harris Corp.*, 352 F.3d 1369 (Fed. Cir. 2003), the Federal Circuit was presented with just such a case. There, the jury awarded damages for price erosion, and on appeal, defendant contended that Ericsson’s expert failed to consider that

Ericsson would have lost sales in response to an elevated price. *Id.* at 1378. Ericsson conceded that its expert had not performed an elasticity calculation, but argued that “an elasticity calculation is not required to recover for price erosion when the patent owner instead establishes barriers to entry,” arguing that the patent in suit created such a barrier, which prevented anyone other than the infringer from offering an acceptable noninfringing alternative to its patented product. *Id.* The Federal Circuit affirmed the award even though Ericsson’s expert had not, as Zurn puts it, “conducted a scientific analysis of price elasticity.” *Id* at 1379. *See also Global Traffic Techs., LLC v Emtrac Systems*, No. 10-4110, 2013 U.S. Dist. LEXIS 73700 at \*67 (D. Minn. May 24, 2013) (denying *Daubert* motion as to plaintiff’s damages expert’s price erosion opinion on the ground he “used a method approved in *Ericsson v. Harris Corp.*[ ] to analyze price erosion”); *SynQor, Inc. v. Artesyn Techs, Inc.*, No. 2:07-CV-497, 2010 U.S. Dist. LEXIS 144244 at \*20 (E.D. Tex. Dec. 13, 2010) (denying *Daubert* motion in which the defendant sought to preclude the plaintiff’s expert from testifying as to price erosion damages rejecting the argument that the expert’s testimony should be excluded because “Mr. Reed failed to create a model to test price elasticity at the calculated ‘but for’ price. *Crystal Semiconductor...*”) The Federal Circuit subsequently sustained the jury’s award of price erosion damages, noting that there was sufficient technical evidence adduced that there were no acceptable noninfringing alternatives to which customers would have switched if the plaintiff raised its prices: “In sum the jury could reasonably have concluded that testimony from some of Defendants’ witnesses indicated customers would not have switched to noninfringing alternatives in response to SynQor’s higher prices... this court detects sufficient evidence for the jury to have accepted Mr. Reed’s ‘but for’ pricing.” *SynQor Inc. Artsyn Techs., Inc.*, 709 F.3d 1365, 1381-82.); *Lam, Inc.*

*v. Johns Manville Corp*, 718 F.2d 1056, 1067 (Fed. Cir. 1983) (affirming award of price erosion damages because plaintiff had shown the market “had only two suppliers”).

Here, the relevant market is a two-supplier market with a lack of non-infringing alternatives. (*See* discussion *infra*.) Moreover, the “alternatives” proffered by Zurn are unsatisfactory to any relevant customer. Therefore, if Sloan had followed its 2005 plan and charged a higher price for MDFVs, customers would have had no acceptable noninfringing alternatives, so they would have purchased Sloan MDFVs at the higher price point. A specific analysis is not required for such a market, and here, industry experts will testify that because of the lack of acceptable alternatives at anywhere near the price point of a MDFV, Sloan could have charged—and customers would have paid—higher prices for MDFVs if Zurn had not entered the market. (*See e.g.*, Ex. 71 Aykroyd II at 17:2-22 , 49:4 - 50:17; Ex. 80 Allen dep. at 70:2 - 76:17, 95:12 - 98:19, 106:12 – 107:2; Ex. 16 Ballanco Report p. 45.)

As to the manual dual flush handles alone, there are clearly no acceptable noninfringing alternatives. The handles were used to retrofit existing flush valves—which are almost always made by Sloan or Zurn—during a renovation. (Ex. 73 Madison dep. 94:20 – 95:23; Ex. 82 Boyer dep. 73:18 to 74:6.) Manual dual flush handles were only made by two other manufacturers, AMTC and Coyne & Delaney. The Coyne & Delaney handle could not be retrofitted into a Zurn or Sloan flush valve and the AMTC handle did not effectively clean the bowl. (Ex. 91, Wilson Dep. 38:22 - 39:2, 37:10-17, May 2, 2013.) Because customers are purchasing handles alone, [REDACTED] (Ex. 74 Sloan price list A at p. 93), the far more expensive electronic dual flush valves or complete 1.28 flush valves would not have been acceptable noninfringing alternatives even if the price of the handle was much higher. (Ex. 74 Sloan price list.) Furthermore, the manual dual flush handles (as opposed to complete valves)

are used only in retrofit projects and 1.28 gpf flush valve presents serious problems in buildings that were designed for larger volumes of water, making it an unacceptable alternative for major renovations or retrofit projects. (Ex. 82, Boyer dep. 190:23 to 191:3, 191:22 to 192:9; Ex. 16 Ballanco Report pp. 37-38.)

There are also no acceptable noninfringing alternative to the MDFV. If purchasers are motivated to purchase because of particular features available only from the patented product, products without such features – even if otherwise competing in the marketplace – would not be acceptable noninfringing substitutes. *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 901 (Fed. Cir. 1986) (a product without the benefit of the patent can not be termed an acceptable substitute to the customer who wants those advantages); *See also Slimfold Mfg. Co., Inc. v. Kinkead Indus., Inc.*, 932 F.2d 1453, 1458 (Fed. Cir. 1991) (the patent owner failed to show that buyers of bi-fold metal doors specifically want a door having the advantages of the patent). 1.6 gpf single flush valves do not provide water savings or LEED points, the primary reason for the MDFV's invention and market relevance. (Ex. 82 Boyer dep. 185:16-20; Ex. 73 Madison dep. 102:2-5.) Customers purchase MDFV at a premium over the 1.6 gpf flush valves because they are seeking to conserve water, earn LEED points, and/or appear interested in water conservation. (Ex. 73 Madison dep. 16:18 to 17:11; Ex. 70 Aykroyd I 123:1-12; Ex. 84 Hofmann Report ¶ 44.) The fact that customers paid an initial premium for the MDFV over the single flush valve further demonstrates they were interested in saving water or the long term cost benefits. Customers would achieve enough cost savings in water to more than make up for the price difference between a MDFV and a single flush valve. (Ex. 16 Ballanco Report pp. 45-46; Ex. 18, Ballanco Reply Rpt. at 40-43.) Because the 1.6 gpf single flush valve provides none of these benefits, it is not an acceptable alternative to the patented technology.

Next, while the Sloan 1.28 gpf flush valve has begun to gain acceptance — and even then, only for limited applications — in recent years, at the time of the hypothetical negotiation in 2006, the Zurn 1.28 gpf flush valve was not available and Sloan was barely selling any of the product.<sup>15</sup> (Ex. 82 Boyer 190:23 - 191:3, 191:22 - 192:9; Ex. 84 Hofmann p. 44.) Potential customers were very leery of the 1.28 gpf product until relatively recently. (Ex. 16 Ballanco Report pp. 37-38; Ex. 82 Boyer dep. 190:23 to 191:3, 191:22 to 192:9.) Even today, the 1.28 gpf flush valve presents serious problems in buildings that were designed for larger volumes of water, making it an unacceptable alternative for renovations or retrofit projects. (Ex. 57 Ballanco dep. 147:5-9; 151:16-152:6; Ex. 82 Boyer dep. 190:23 to 191:3, 191:22 to 192:9.) Furthermore, in a new construction project, customers who purchase a MDFV and a toilet spend more than customers that purchase a manual 1.28 gpf flush valve and toilet. (Ex. 74 Sloan price guide). This alone is evidence that although a cheaper product exists, there is still a demand for the features of the MDFV (such as its visible evidence of the building owner's commitment to protecting the environment, and its more reliable achievement of a complete cleaning of the bowl) that the manual 1.28 product does not have, and therefore, the manual 1.28 product is not an acceptable noninfringing alternative for many customers even in new construction. The electronic 1.28 product, like the electronic dual flush product, is far more expensive than the MDFV product. (Ex. 74 Sloan price guide; Ex. 75 Zurn price guides.)

Finally, while some electronic flush valves do contain a water conservation feature, they sell for more than double the price of the MDFV and are prone to vandalism. (Ex. 16 Ballanco Report pp. 38-39; Ex. 82 Boyer 192:10-15.) Moreover, there is a factual dispute about whether

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<sup>15</sup> [REDACTED]

[REDACTED] Ex. 86, Hofmann Dep. p. 96:2 – 97:18.)

electronic flushometers conserve water at all, because they can sometimes flush when flushing is not necessary. (Ex. 87 Sensor-Operating Plumbing Fixtures – Do They Save Water? Article dated March 2010.)

Therefore, absent Zurn’s infringement, Sloan would not have lost sales of MDFVs even if the price increased because the price of alternative products far exceeded the price of the MDFV and no competition existed at the time of the hypothetical negotiation. *See Ericsson*, 352 F.3d at 1379.

**F. Whether Sloan Is Entitled A Reasonable Royalty During The Provisional Rights Period Is A Jury Question.**

Zurn argues that 35 U.S.C. § 154(d)(1) authorizes the recovery of provisional damages for a reasonably royalty but does not authorize broader lost profits damages available under 35 U.S.C. § 284. Mot. at 20-21. Again, Zurn misses the point. Bero’s analysis for the pre-issuance period does *not* seek an award of lost profits, but rather a reasonable royalty. The fact that the licensor would have insisted on a higher royalty to compensate it for the risk that it would have to lower its prices on its own sales if it licensed a direct competitor is a proper consideration when setting a reasonable royalty. *Telemac Corp. V. US/Intellicom, Inc.* 185 F. Supp. 2d 1084, 1102 (N.D. Cal. 2011) (“In effect, in order to license to a direct competitor, Telemac would have required significantly higher royalty rates to compensate it for the risks of quality, fraud and general price erosion cause by USI.”). In calculating the reasonable royalty, Bero properly took into account all of the economic downsides Sloan would have anticipated experiencing if it licensed to Zurn, including an anticipation that Sloan would lose profits if it did so. (Ex. 68 Bero Report pp. 46-53; Ex. 69 Bero Reply pp. 55-58.) The *Georgia-Pacific* factors address the monetary benefits to the licensee from obtaining a license and the monetary detriments to the licensor from granting a license. While those factors will drive any license negotiation, that does

not mean that determining a reasonable royalty is the same as awarding lost profits, and it does not convert a reasonable royalty analysis into a lost profits claim. In fact, Bero's opinion for the pre-issuance period results in a royalty per unit less than the profits Sloan would have anticipated losing for each unit Zurn sold. (Ex. 68 Bero Report pp. 46-53; Ex. 69 Bero Reply pp. 55-58.)

Finally, Zurn accuses of improperly including lost profits due to price erosion for Zurn's pre-issuance activities. Mot. at 20-21. While he lawfully considered a portion of the harm Sloan would have anticipated sustaining as a result of price erosion if it licensed Zurn in determining the reasonable royalty for the pre-issuance period (see discussion *supra*), Bero only calculated lost profits due to price erosion injury for the time period after the patent had issued. (Ex. 68 Bero 59-62; Ex. 69 Bero Reply 60-62.) Because 35 U.S.C. § 154(d)(1) only applies to the provisional period, Bero is allowed to include lost profits due to price erosion damages after the patent issued.

#### **IV. CONCLUSION**

For the foregoing reasons, Sloan respectfully requests that the Court deny Zurn's motion to exclude testimony of Richard Bero in its entirety.

Dated: July 25, 2013

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I, Jason A. Berta, an attorney, hereby certify that on July 25, 2013, I caused to be filed electronically PLAINTIFF SLOAN VALVE COMPANY'S RESPONSE BRIEF IN OPPOSITION TO DEFENDANTS' DAUBERT MOTION TO EXCLUDE TESTIMONY OF RICHARD BERO with the Clerk of the Court using the CM/ECF system, which will send an electronic copy of the foregoing to counsel of record and constitutes service under Federal Rule of Civil Procedure 5(b)(2)(D) pursuant to Local Rule 5.9 of the Northern District of Illinois.

/s/ Jason A. Berta